DISTRIBUTION OF FIRMS IN FIVE SECTIONS OF UKRAINE

As indicated in the *Methodological Report* in Appendix A, the household survey sample was drawn proportionally to the population of the Ukraine. The percent of the sample in each of the five regions closely matches the population in each of these regions. Each region sample can be projected to regional totals using the ratio of the population of the region to the number of interviews performed in that region. Table C-1 is based on the answers of householders who claimed employment.

D.	Zero	1-50	51-250	Over 250	TD 4 1
Region	Employees	Employees	Employees	Employees	Totals
Western	605,439	896,186	899,606	632,803	3,034,034
West-Central	431,120	1,001,592	857,885	931,916	3,222,512
East-Central	331,602	765,236	735,477	829,006	2,661,321
Eastern	276,855	685,328	689,867	1,275,346	2,927,396
Southern	777,906	922,940	615,293	650,453	2,966,592
Totals	2.422.921	4 271 282	3 798 128	4 319 523	14 811 855

Table C-1. Employment in Five Regions of The Ukraine, by Employment Size Class

This table shows over 5,000,000 less employees than tables 1-1, 2-1, and 2-2 of the main report. The difference is due largely to the difference in the firms with over 250 employees. This difference and the basis for its use will be discussed in Appendix D. The slight reduction in the number of employees in the other employee size groups is within normal error limits and is largely due to the fact that regional and industrial projection required responses more specific to industry and region than the more general tables mentioned above. The distribution of employment on a percentage basis for each of the size classes is given in table C-2.

Table C-2. Percentage Employment in Five Regions of The Ukraine, by Employment Size Class

Region	Zero Employees	1-50 Employees	51-250 Employees	Over 250 Employees	Totals
Western	20.0	29.5	29.7	20.9	100%
West-Central	13.4	31.1	26.6	28.9	100%
East-Central	12.5	28.8	27.6	31.2	100%
Eastern	9.5	23.4	23.6	43.6	100%
Southern	26.2	31.1	20.7	21.9	100%
All Regions	16.4	28.8	25.6	29.2	100%

The employment in firms of 250 employees or less is over 70 percent of all employees in firms selling a good or service in the marketplace.. This compares to the just under 54% reported in Table 1-3.

The sample of firm interviews from the registry sample yielded an average of 11.89 employees in firms of 1-50 employees, 125.05 employees in firms of 51-250 employees and 905.84 employees in firms with more than 250 employees. Using these averages, the number of firms of each size class in each region is calculated and presented in table C-3.

Table C-3. Projected Number of Enterprises in Five Regions of The Ukraine, by Employment Size Class

Region	Zero Employees	1-50 Employees	51-250 Employees	Over 250 Employees	Totals
Western	605,439	76,373	7,194	699	688,705
West-Central	431,120	84,238	6,860	1,029	523,247
East-Central	331,602	64,360	5,881	915	402,758
Eastern	276,855	57,631	5,473	1,408	341,367
Southern	277,906	77,623	4,920	718	861,168
All Regions	2,422,922	359,226	30,629	4,769	2,817,245

The registry sample from the State Committee of Statistics listed 10,851 firms with over 250 employees. This higher number was used to estimate firms and employment in the body of this report. The household worker sample revealed less than half as many firms of that size. From the *Methodological Report* it can be seen that over 20 percent of the registry firms in this employment size class could not be located. More important is that fact that the Committee was unable to distinguish between firms operating in the marketplace and other entities (including farming operations) that were not included in this survey. The percent distribution of firms by size across the five regions is given in table C-4.

Table C-4. Percent of Firms by Employment Size Class and by Region of The Ukraine

	Zero	1-50	51-250	Over 250	Regional
Region	Employees	Employees	Employees	Employees	Share
Western	25.0	21.0	23.7	14.7	24.52
West-Central	17.8	23.4	22.6	21.6	18.6
East-Central	13.7	17.9	19.4	19.2	14.3
Eastern	11.4	16.0	18.1	29.5	12.1
Southern	32.1	21.6	16.2	15.1	30.6
All Regions	100%	100%	100%	100%	100%

The largest firms are predominant in the Eastern Region and the smallest firms are a larger percentage of enterprises in the Southern, Western, and West-Central regions.

EMPLOYMENT BY INDUSTRY IN EACH OF THE FIVE REGIONS

The Regional industry and employment size projections developed in this section of the Appendix should be used with caution. Because the projections are based solely on population distribution, the projections will not exactly match the projections developed in Section 1 and Section 2 of the main report which are based on distributions from both the household and registry samples. In some industries the number of observations in the sample are too small to provide a viable base for projection. In some industries including Agriculture and Forestry and Social and Cultural Services, it appears that household members reporting employment in non-profit or quasi-governmental entities were included in the sample survey. These records should have been edited and removed, since the survey was intended to cover only entities selling goods and services in the marketplace. Some reported government employment has been isolated in a Public Sector Administration category which is found in each of the Regional Tables. This category was included as a subset of "Other" industries and employment in the main body of the Report.

WESTERN REGION

The projected employment by industry is based on the ratio of the total population to the size of the sample of interviews. The Western Region is composed of the following oblasts:

Volyn

Rovno

L'vov

Ivano-Frankovsk

Ternopol

Transcarpathian

Chernovtsy

Projected employment by industry in the Western Region is given in table C-5.

Table C-5. Projected Employment by Industry and Employment Size Class – Western Region

	Firm Size						
Industry	Zero Employees	150 Employees	51-250 Employees	Over 250 Employees	All Sizes Of Firms		
Construction	75,252	37,626	51,308	3,421	167,6074		
Mining & Manufacturing	10,262	47,888	133,402	212,075	406,626		
Agriculture and Forestry	58,149	75,252	212,075	157,346	502,822		
Transport & Communications	27,364	102,617	47,888	71,832	249,701		

Wholesale & Retail Trade	314,691	119,719	23,944	10,262	468,616
Eating & Drinking Places	3,421	37,626	6,841	6,641	54,729
Domestic Services, Hotels, Recreation	37,626	85,814	64,991	10,262	198,392
Social & Cultural Services	27,364	280,486	280,486	133,402	721,738
Finance, Insurance & Real Estate	6,841	13,682	10,262		30,738
Consulting & Scientific Services	6,841	13,682	6,841	6,841	34,206
Other Business Services	6,841		6,841		13,682
Public Sector Administration		51,308	27,364	10,262	88,934
Other	30,875	30,785	27,364	10,262	98,196
Totals	605,439	896,186	899,606	682,303	3,034,034

In reading the regional industry tables, caution should be exercised. These tables have projection factors between 3000 and 5000. That is, a cell with an entry of less than 10,000 employees may be the result of only 2 or 3 sample interviews. Since a single sample may have an error as a result of communication difficulties between the interviewer and the subject, the individual entries should not be given much weight unless the projected employment is above 100,000. The rows and columns may be scanned for patterns and in such scanning the decision may be based upon the overall impression of projected employment in the hundreds of thousands. In reading tables projected from sparse data there is no substitute for common sense. Table C-5 is converted to percent distribution of industry employment for each firm size group. These data are presented as table C-6.

Table C-6. Percent Employment, by Industry and Employment Size Class - Western Region

	Firm Size					
Industry	Zero Employees	1-50 Employees	51-250 Employees	Over 250 Employees	All Sizes Of Firms	
Construction	12.4	4.2	5.7	0.5	5.5	
Mining & Manufacturing	1.7	5.3	14.8	33.5	13.3	
Agriculture and Forestry	9.6	8.4	23.6	24.9	16.6	
Transport & Communications	4.5	11.5	5.3	11.4	8.2	
Wholesale & Retail						

Trade	52.0	13.4	2.7	1.6	15.5
Eating & Drinking					
Places	0.6	4.2	0.8	1.1	1.8
Domestic Services,					
Hotels, Recreation	6.2	9.5	7.2	1.6	8.5
Social &					
Cultural Services	4.5	31.3	31.2	21.1	23.8
Finance, Insurance					
& Real Estate	1.1	1.5	1.1		1.0
Consulting &					
Scientific Services	1.1	1.5	0.8	1.1	1.1
Other Business					
Services	1.1		0.8		0.5
Public Sector					
Administration		5.7	3.0	1.6	2.9
Other	5.1	3.4	3.0	1.6	3.3
Totals	100%	100%	100%	100%	100%

The allocation of employment was done by the interviewers. The results are not as might be wished. Only employment in firms offering goods or services in the marketplace was to be considered for inclusion in the survey. The original questionnaire had no space for "Public Sector Administration," or for other non-profit activity. Apparently the interviewers felt it necessary to record employment wherever it was encountered. As a result, an industry category for Public Sector Administration has been added in Table C-6. In the main body of the report, Public Sector Administration is combined with the "Other" category.

The replies "Social & Cultural Services" may have represented employees who were not in an industry offering goods or services in the marketplace, e.g., schools, orphanages, hospitals, etc. Despite intensive training, this type of difficulty is inevitable with several hundred interviewers working with a translation of a document where the English version contains unfamiliar terms. From the narrative material, this problem can be addressed specifically in any future survey. The predominance of Wholesale and Retail Trade among small enterprises and Manufacturing and Mining and Agriculture and Forestry (including lumber and logging) among the largest businesses is apparent.

WEST-CENTRAL REGION

The West-Central Region is composed of the following oblasts:

Khmelnitskiy

Zhitomir

Kiev (city)

Kiev oblast

Cherkassy

Kirovograd

Vynnitsa.

Projected employment by industry for the West-Central Region is given in table C-7

Table C-7. Projected Employment by Industry and by Employment Size Class West-Central Region

			Firm Size		
	Zero	1-50	51-250	Over 250	All Sizes
Industry	Employees	Employees	Employees	Employees	Of Firms
Construction	34,838	52,257	26,128	21,174	134,997
Mining &					
Manufacturing	4,355	65,321	117,578	326,606	503,860
Agriculture and					
Forestry	4,355	82,740	82,740	209,028	409,346
Transport &					
Communications	26,128	104,514	78,385	74,031	283,059
Wholesale & Retail					
Trade	222,092	169,835	34,838	34,838	431,120
Eating & Drinking					
Places	8,709	43547	8,709	4,355	65,321
Domestic Services,					
Hotels, Recreation	34,838	91,450	82,740	17,419	226,447
Social &					
Cultural Services	26,128	261,285	269,994	182,899	740,307
Finance, Insurance					
& Real Estate	4,355	8,709	8,709	8,709	30,483
Consulting &					
Scientific Services	8,709	8,709	39,193	52,257	108,869
Other Business					
Services	21,774	13,064			34,838
Public Sector					
Administration		65,321	39,193	17,419	121,933
Other	34,838	47,902	39,193	13,064	134,997
Totals	431,120	1,001,592	857,855	931,916	3,222,512

Table C-7 is also converted to percent distribution of employment within each employment size group. These percents are presented as Table C-8.

Table C-8. Percent Employment, Firm Size by Industry – West-Central Region

			Firm Size		
	Zero	1-50	51-250	Over 250	All Sizes
Industry	Employees	Employees	Employees	Employees	Of Firms
Construction	8.1	5.2	3.1	2.3	4.2
Mining & Manufacturing	1.0	6.5	13.7	35.1	16.0
Agriculture and Forestry	1.1	8.3	13.2	22.4	12.7
Transport & Communications	6.06	10.4	9.1	7.9	8.8
Wholesale & Retail Trade	51.5	17.0	4.1	0.5	13.4
Eating & Drinking Places	2.0	4.4	1.0	0.5	2.0
Domestic Services, Hotels, Recreation	8.1	9.1	9.6	1.9	7.0
Social & Cultural Services	6.1	26.1	31.5	19.6	23.0
Finance, Insurance & Real Estate	1.0	0.9	1.0	0.9	1.0
Consulting & Scientific Services	2.0	0.9	4.6	5.6	3.4
Other Business Services	5.1	1.3			1.1
Public Sector Administration		6.5	4.6	1.9	3.8
Other	8.1	4.8	4.6	1.4	4.2
Totals	100%	100%	100%	100%	100%

The West-Central Region is not greatly different from the Western Region. Agribusiness is slightly more important especially among medium size firms. Social and cultural services remain as the largest industry. Further research is necessary to see how much of this industry is truly market-oriented.

EAST-CENTRAL REGION

The East-Central Region is composed of the following oblasts:

Chernigov

Sumy

Poltava

Dnepropetrovsk.

Projected employment by industry is given in table C-9.

Table C-9. Projected Employment by Industry and by Employment Size Class East-Central Region

			Firm Size		
	Zero	1-50	51-250	Over 250	All Sizes
Industry	Employees	Employees	Employees	Employees	Of Firms
Construction	38,202	29,759	68,021	34,010	170,052
Mining &					
Manufacturing	8,503	29,759	97,780	289,089	425,131
Agriculture and					
Forestry	55,267	42,513	93,529	174,304	365,613
Transport &					
Communications	4,251	68,021	89,278	102,031	263,581
Wholesale & Retail					
Trade	157,299	85,026	42,513	12,754	297,592
Eating & Drinking					
Places		34,010	8,503	4,251	46,764
Domestic Services,					
Hotels, Recreation	29,759	97,780	34,010	42,513	204,063
Social &					
Cultural Services	17,005	242,325	187,058	131,791	578,178
Finance, Insurance					
& Real Estate	4,251	17,005	29,759	4,251	55,297
Consulting &					
Scientific Services		8,503		4,251	12,754
Other Business					
Services	4,251	4,251			8,503
Public Sector					
Administration		59,518	42,513	17,005	119,037
Other	12,754	46,464	42,513	12,754	114,785
Totals	331,602	765,236	735,477	829,006	2,329,718

These data are converted to percents of firm size employment in table C-10.

Table C-10. Percent Employment, by Industry and Employment Size Class East-Central Region

			Firm Size		
	Zero	1-50	51-250	Over 250	All Sizes
Industry	Employees	Employees	Employees	Employees	Of Firms
Construction	11.5	3.9	9.3	4.1	6.4
Mining &					
Manufacturing	2.6	3.9	13.3	34.9	16.0
Agriculture and	16.7	5.6	12.7	21.0	13.7
Forestry					
Transport &					
Communications	1.3	8.9	12.1	12.3	9.9
Wholesale & Retail					
Trade	47.4	11.1	5.8	1.5	11.2
Eating & Drinking					
Places		4.4	1.2	0.5	1.8
Domestic Services,	9.0	12.8	4.6	5.1	7.7
Hotels, Recreation					
Social &					
Cultural Services	5.1	31.7	25.4	15.9	21.7
Finance, Insurance					
& Real Estate	1.3	2.2	2.2	0.5	2.1
Consulting &					
Scientific Services		1.1		0.5	0.5
Other Business					
Services	1.3	0.6			0.3
Public Sector					
Administration		7.8	5.8	2.1	4.5
Other	3.9	6.1	5.8	1.5	4.3
Totals	100%	100%	100%	100%	100%

An observation of such tables is the relative constancy of industry dominance by firm size. The largest firm size group dominates Mining and Manufacturing and the smaller size groups dominate Wholesale and Retail Trade. The persistence of "Social & Cultural Services" requires further exploration. Either these are non-market institutions or entertainment-related items have been removed from retail trade. It was the intent of the survey to use the International Standard Industry Classification System. This worked fairly well with the knowledgeable executives from larger firms in the interviews from the registry sample. The household survey interviewed workers who may have had a narrower perspective of the industry in which their firm was located. Some of the interviewed workers may not have understood that the firm had to sell a product or service in the market in order to be included in the survey.

EASTERN REGION

The Eastern region is composed of the following oblasts:

Kharkov

Donetsk

Lugansk.

Projected employment by industry is given in table C-11.

Table C-11. Projected Employment by Industry and Employment Size Class Eastern Region

	Firm Size					
	Zero	1-50	51-250	Over 250	All Sizes	
Industry	Employees	Employees	Employees	Employees	Of Firms	
Construction	18,154	13,616	45,386	40,847	118,004	
Mining &						
Manufacturing	4,539	45,386	108,926	794,255	953,106	
Agriculture and						
Forestry	27,232	36,309	54,463	90,772	208,776	
Transport &						
Communications	13,616	68,079	54,463	77,156	213,314	
Wholesale & Retail						
Trade	158,851	104,388	27,232	9,077	299,548	
Eating & Drinking						
Places		36,309	18,154	27,232	81,965	
Domestic Services,						
Hotels, Recreation	13,616	118,004	77,156	36,309	245,084	
Social &						
Cultural Services	13,616	186,083	217,853	131,619	549,170	
Finance, Insurance						
& Real Estate		27,232	13,616	9,077	49,925	
Consulting &						
Scientific Services	9,077	4,539		9,077	22,693	
Other Business						
Services						
Public Sector						
Administration		22,693	45,386	36,309	104,388	
Other	18,154	22,693	27,232	13,616	81,695	
Totals	276,855	685,328	689,867	1,275,346	2,927,396	

In reading these tables it may be noted that certain numbers appear frequently in different cells. This duplication of cell values is due to the fact that each sample observation is projected by a common factor. In the case of table C-11, the projection factor is 4,539. This number is the ratio of the population of Eastern Region to the number of householders interviewed. Each sample observation is multiplied by this factor. This causes repeated appearance of numbers such as 4,539 for a sample observation of one, and 9,077 for a sample observation of 2. Since numbers

of employees of less than 50,000 are based upon sample observations of 10 or less, caution should be used in interpreting these numbers. These data are presented as percent of firm size employment in table B-12.

Table C-12. Percent Employment, by Industry and Employment Size Class Eastern Region

	Firm Size					
	Zero	1-50	51-250	Over 250	All Sizes	
Industry	Employees	Employees	Employees	Employees	Of Firms	
Construction	6.6	2.0	6.6	3.2	4.0	
Mining &						
Manufacturing	1.6	6.6	15.8	62.3	33.6	
Agriculture and						
Forestry	9.8	5.3	7.9	7.1	7.1	
Transport &						
Communications	4.9	9.9	7.9	6.1	7.3	
Wholesale & Retail						
Trade	57.4	15.2	4.0	0.7	10.2	
Eating & Drinking						
Places		5.3	2.6	2.1	2.8	
Domestic Services,						
Hotels, Recreation	4.9	17.2	11.2	2.9	8.4	
Social &						
Cultural Services	4.9	27.2	31.6	10.3	18.8	
Finance, Insurance						
& Real Estate		4.0	2.0	0.7	1.7	
Consulting &						
Scientific Services	3.3	0.7		0.7	0.8	
Other Business						
Services						
Public Sector						
Administration		3.3	6.6	2.9	3.6	
Other	6.6	3.3	4.0	1.1	2.8	
Totals	100%	100%	100%	100%	100%	

The Eastern Region is noteworthy for the high concentration of employment in Mining and Manufacturing. This is noted especially in the largest employment size group of firms. A final note of warning: it must be remembered that many of the cell entries in the regional tables are based upon a very small number of interviews with very few persons. Any misunderstanding in the original interview is magnified several thousand times when the sample is projected to the population.

SOUTHERN REGION

The Southern Region is composed of the following oblasts:

Zaporozhie

Kherson

Nikolaev

Odessa

Crimea

Projected employment by industry and firm size for the Southern Region is given in Table C-13,

Table C-13. Projected Employment by Industry and Employment Size Class Southern Region

	Firm Size					
	Zero	1-50	51-250	Over 250	All Sizes	
Industry	Employees	Employees	Employees	Employees	Of Firms	
Construction	39,555	43,950	74,714		158,218	
Mining & Manufacturing	9.700	40.244	74.714	246 117	277.066	
	8,790	48,344	74,714	246,117	377,966	
Agriculture and Forestry	162,613	83,504	70,319	193,378	509,814	
Transport & Communications	57,134	39,555	65,924	92,294	254,907	
Wholesale & Retail Trade	276,882	136,243	30,765		443,890	
Eating & Drinking Places	13,185	57,134	8,790	4,395	83,504	
Domestic Services, Hotels, Recreation	87,889	114,269	48,344	21,975	272,487	
Social & Cultural Services	57,134	268,092	167,008	70,319	562,554	
Finance, Insurance & Real Estate	8,790	35,160	13,185		57,134	
Consulting & Scientific Services	8,790	4,395	8,790		21,975	
Other Business Services		4,395			4,395	
Public Sector Administration		57,134	21,975	8,790	87,889	
Other	57,134	30,765	30,765	8,790	127,454	
Totals	777,908	922,940	615,293	646,058	2,962,197	

The proportionately large numbers of employees in the two smallest employee size groups makes the Southern Region the leader among all regions in terms of relative employment in very small businesses. Agribusiness (food and fiber production, processing and distribution) among zero employee firms is the highest in the Southern Region. Over 78 percent of employment is in small and medium enterprises (SMEs), second only to the Western Region. These data are presented as percent of employment by firm size in Table C-14

Table C-14. Percent Employment, by Industry and Employment Size Class Southern Region

	Firm Size					
Industry	Zero Employees	1-50 Employees	51-250 Employees	Over 250 Employees	All Sizes Of Firms	
Construction	5.1	4.8	12.1		5.3	
Mining & Manufacturing	1.1	5.2	12.1	38.1	12.8	
Agriculture and Forestry	20.9	9.1	11.4	29.9	17.2	
Transport & Communications	7.3	4.3	10.7	14.3	8.6	
Wholesale & Retail Trade	35.6	14.8	5.0		15.0	
Eating & Drinking Places	1.7	6.2	1.4	0.7	2.8	
Domestic Services, Hotels, Recreation	11.3	12.4	7.9	3.4	9.2	
Social & Cultural Services	7.3	29.1	27.1	10.9	19.0	
Finance, Insurance & Real Estate	1.1	3.8	2.1		1.9	
Consulting & Scientific Services	1.1	0.5	1.4		0.7	
Other Business Services		0.5			0.2	
Public Sector Administration		6.2	3.6	1.4	3.0	
Other	7.3	3.3	5.0	1.4	4.3	
Totals	100%	100%	100%	100%	100%	

The Southern Region joins the Western Region as the two regions where Agricultural and Forestry related industries surpass Mining and Manufacturing as the dominant market-oriented industry of the region. The high incidence of Social & Cultural employment is present throughout all regions and is probably due to the interviewer's lack of understanding as to what was a market-oriented business. Translation of the text from the interviewers worksheet will be

necessary to track the incidence of both social and cultural services and the reasons why the Public Administration industry was created by interviewers.